

COPPER

SAFETY DATA SHEET

DATE OF LAST REVISION: 06/25/15

Section 1: Identification

Product Name: Copper
CAS Number: 7440-50-8 / **EC Number:** 231-159-6
Company: Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110
For more information call: 412-469-8466
(Monday - Friday 9:00 - 5:00 EST)

Section 2: HAZARD IDENTIFICATION

Signal Word: Danger



Hazard Statements: H228 Flammable solid
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statements: P261 Avoid breathing dust/fume/vapor
P210 Keep away from heat/sparks/open flames/hot surfaces - No smoking
P280 Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses if present and easy to do - continue rinsing
P405 Store locked up
P501 Dispose of contents/container in accordance with local/regional/national/
international regulations

HMIS Health Ratings (scale 0-4)

	Powder	Bulk
Health	1	0
Flammability	3	0
Physical	1	0

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Section 3: Composition

Chemical characterization: Metal

CAS# Description: 7440-50-8

Percentage: 100 wt%

EC number: 231-159-6

Section 4: FIRST AID MEASURES

Eye Contact: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Skin Contact: Wash affected area with mild soap and water.

Inhalation: Remove victim to fresh air. If unconscious, place patient stably in side position for transportation.

Ingestion: Seek medical treatment.

General Treatment: Seek medical attention if symptoms persist.

Special Treatment: None

Important Symptoms: None

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing Media: Do not use water for metal fires - use CO₂, sand, extinguishing powder

Flammability: Flammable as powder only

Special Fire Fighting Procedure: Use full-face, self contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in Section 10.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Permissible Exposure Limits: 0.1 mg/m³ as Cu, metal fume, long-term value

1 mg/m³ as Cu, metal dusts and mists, long-term value

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Threshold Limit Value:	0.2 mg/m ³ as Cu, metal fume, long-term value 1 mg/m ³ as Cu, metal dusts and mists, long-term value
Special Equipment:	None
Respiratory Protection:	Dust respirator
Protective Gloves:	Rubber Gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Color:	Metallic Light Brown
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	1083°C
Flash Point:	2562°C
Autoignition Temperature:	N/A
Density:	8.94 g/cc
Molecular Weight:	63.55 g/mol

Section 10: STABILITY AND REACTIVITY

Reactivity:	Reacts with Acids, Oxidizing agents
Chemical Stability:	Stable under recommended storage conditions
Incompatible Conditions:	Protect against electrostatic charges
Hazardous Decomposition Products:	Metal oxide fume, copper oxides

Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Causes serious eye damage

Skin: May cause irritation

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

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Median Lethal Dose: >5000 mg/kg for mouse by mouth
Carcinogen: The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data available.

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: Medium

Persistence Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: May cause long lasting harmful effect on aquatic life. Do not allow material to be released to the environment without proper governmental permits. Also poisonous for fish and plankton in water bodies. Avoid transfer into the environment. Toxic to aquatic life.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, national, and international regulations

Section 14: TRANSPORT INFORMATION

Hazardous: Hazardous as powder only.



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives.
Packing Group: III
UN Number: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s. (Copper Powder)

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Section 15: REGULATORY INFORMATION

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: Yes

Section 16: OTHER INFORMATION

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.